Remarks

Claims 1-32, 35, and 36 are pending. Claims 1-20, 22-28, 30, 31, 35, and 36 have been rejected. Claims 2, 21, and 29 are objected to. By this Amendment, claim 2 has been canceled and claim 35 is amended. Applicants respectfully request reconsideration of the rejected claims claims.

§ 112 Rejections

Claim 25 stands rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, claim 35 lack antecedent basis for the term "said organic composition." Applicants have amended the claim to delete the word "organic" Claim 35 depends from claim 1, which provides antecedent basis for "a composition."

Applicants submit that the rejection of claim 35 under 35 USC § 112, second paragraph, has been overcome and should be withdrawn.

§ 103 Rejections

Claims 1-20, 22-24, 26-27, and 35-36 stands rejected under 35 USC § 103(a) as being unpatentable over Chauvette (U.S.P.N. 6,391,226) in view of Hong (U.S.P.N. 5,663,016). Applicants respectfully traverse this rejection.

The Office Action asserts that Chauvette discloses a method for detecting wear on a substrate by coating the surface with a coating composition containing a fluorescent compound, exposing the coated surface to wear, having a means to activate the fluorescent compound, and detecting fluorescence. The Office Action acknowledges that Chauvette does not directly disclose that radiation is used to excite fluorescence in the coating, but asserts that "it is very well known to use a radiation source to cause an item to fluoresce, and it would be obvious to one of ordinary skill at the time the invention was made to use a radiation source, such as an exciting light, in order to cause the fluorescent sensor in the coating to fluoresce." Applicants respectfully disagree.

In order to establish a *prima facie* case of obviousness, the Patent Office must demonstrate that (1) there is a suggestion or motivation in the prior art to modify or combine reference teachings, (2) one skilled in the art would have had a reasonable expectation of success in making the modification or combination, and (3) the prior art reference(s) disclose all of the claim limitations. The fact that one of ordinary skill in the art would have had the capability to modify the method disclosed in the prior art reference(s) is not sufficient. MPEP 2143.01. The prior art reference(s) must provide a motivation or reason for making the changes. MPEP 2142; *Ex parte Chicago Rawhide Manufacturing Co.,* 226 USPQ 438 (PTO Bd. App. 1984).

Applicants submit that the presently claimed invention is not obvious in view of Chauvette, because there is no suggestion or motivation in Chauvette to use ultraviolet radiation to activate the sensors in the coating materials. As explained in Applicant's previous Response, Chauvette clearly teaches chemical activation and deactivation of the sensor, and does not teach or suggest using radiation to activate the sensor. The sensors cited in Chauvette, including the florescent compound β-Naphthol idenitifed by Chauvette as a potential sensor, would produce color change when treated with a "revealer" composition, which is essentially a high pH solution that is used to ionize the sensor and produce color. Under these circumstances, a skilled artisan would have no reason to use UV radiation (e.g., black light) to reveal the visible color since the color change is accomplished through a change in pH.

Furthermore, one of ordinary skill would not have been motivated to use UV radiation (e.g., black light), because it would not have produced the desired effect, i.e. a visible color change that is easily detectable, when used with the particular fluorescent compounds identified by Chauvette. In particular, Chauvette identifies two fluorescent compounds, β-Naphthol and Coumarin, as potential sensors (col. 3, lines 40-42). These compounds are unionized at lower pH (<9). β-Naphthol does fluoresce with an absorption wavelength in the range of 200 to 400nm; however, the emission wavelength for this compound is between 300 to 400nm, which is still in the UV range not the visible range (approximately 400 to 750nm). (See Exhibit C of previous Response, which reports emission at the fluorescence maximum of approximately 350nm.) Thus a spectrophotometer would likely be needed to effectively detect the emitted radiation. *Id.* If one were merely to shine a black light on the substrate surface, little or no visible color would be observed.

The Examiner cites to Hong as showing that Coumarin, which is also identified by Chauvette as a potential sensor, is a fluorescent dye because it absorbs UV light and emits visible light. However, the fact that Coumarin might emit some visible light does not mean that it exhibits a suitably strong emission of visible light to be useful as a fluorescent sensor for use in detecting the wear of floor finish. As Applicants previously pointed out, Coumarin is described in the literature as emitting little fluorescence (see Exhibit D of previous Response). Although some visible light may be emitted, it would be expected to be very weak. This would make it unsuitable and impracticable as a detection means given Chauvette's stated purpose – providing a visual monitoring system that is very simple and allows for a reduction of the burden on the employees responsible for applying and maintaining floor finishing compositions (col. 2, lines 63-67). Weak emission would not be easily detectable by a worker standing above the treated surface and instead would likely require close visible inspection to be detectable. Thus, one skilled in the art, rather relying on the weak fluorescent properties of Coumarin would have been motivated instead to use a pH change to elicit a color change, especially since Chauvette teaches that the sensors should be activated by exposure to a chemical revealer (e.g. an alkaline solution). The skilled artisan would not have been motivated to shine a black light onto a Coumarin-containing composition as this would not be expected to produce an effect that was easily observable. Since Chauvette, alone or in combination with Hong, lacks any teaching or suggestion to expose the coated substrate to UV radiation and provides no motivation to perform this step, this reference is not sufficient to establish a *prima facie* case of obviousness.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the rejection of claims1-20, 22-24, 26-27, and 35-36 under 35 U.S.C. § 103(a) as being unpatentable over Chauvette in view of Hong has been overcome and should be withdrawn.

Claims 25, 28, and 30-31 stand rejected under 35 USC § 103(a) as being unpatentable over Chauvette (U.S.P.N. 6,391,226) in view of Hong (U.S.P.N. 5,663,016), and further in view of Hanneman (U.S.P.N. 4,327,155). Applicants respectfully traverse this rejection.

As discussed above, Chauvette fails to disclose exposing a substrate to UV radiation, and and one skilled in the art, even in view of Hong, would not have been motivated by the teaching of Chauvette to perform this step. The Examiner, however, asserts that it would have been

obvious to combine the teaching of Chauvette and Hong with those of Hanneman to arrive at the methods of claims 25, 28, and 30-31. Applicants disagree.

Hanneman describes applying a coating on the surface of a substrate by plasma or flame spraying the surface with a powdered metal or a powdered metal oxide blend having an effective amount of a UV sensitive phosphor to produce a UV sensitive metallic or ceramic coating (col. 2, lines 13-21). The only coating materials described by Hanneman are inorganic compositions, either protective metal or ceramic coatings, that are applied to metal or ceramic substrates in order to prevent erosion or corrosion. These are vastly different materials from those described by Chauvette and thus a skilled artisan would not have been motivated to combine these teachings since the materials are nonanalogous.

Applicants respectfully submit that the rejection of claims 25, 28, and 30-31 under 35 USC § 103(a) as being unpatentable over Chauvette in view of Hong, and further in view of Hanneman has been overcome and should be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Reconsideration of the application is requested.

A Request for Extension Of Time Under 37 CFR § 1.136(a) and authorization to charge the extension of time fee to Assignee's deposit account is included with this Amendment. A Notice of Appeal is also submitted herewith.

All communications in this case should be direct to the undersigned. If the Examiner believes a telephone discussion would be helpful to resolve any of the outstanding issue in this case, the Examiner is encouraged to call the undersigned at the number listed below.

Respectfully submitted,

December 12, 2003
Date

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